XRootD Roadmap

FTS/XRootD Workshop

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http://xrootd.org

Focus of this presentation

- This presentation focuses on the top-level view
  - What guides the project
  - The structure of the roadmap
  - The challenges we forsee
  - How these may impact the project
- We hope it addresses WLCG existential questions
- The subsequent presentation addresses
  - Milestones
  - Impact
  - Timeframe

Roadmap Guidelines

- Continuously improve **XRootD** suite
  - Security
    - Address problems shown by various QA tools
  - Stability
    - Expand and improve current test suite
  - Performance
    - Implement io_uring support among other endeavors
- Details in the next presentation

Following the Roadmap

- Best way to capture the roadmap is via webpage
  - xrootd.org → Evolution tab → current direction
    - **XRootD** Evolution
      - Complete detailed list of all ongoing activities
    - Release Planning (Features, Impact, Status, Decision/Target Date)
      - Work that will soon be available in a release
- We are a small project with a huge user base
  - Practically all LHC experiments + many outside LHC
  - Community needs are dynamic and occupy our time
    - People interested in the roadmap should consult web page
      - We are looking at ways to make it more digestible

Foreseeable Roadblocks

- Training new Release Manager
  - This is a critical position and changes are disruptive
    - It happens every 5 or so years and is about to happen again!
- User base available effort. variable
  - As a community project we never know available FTE
- Onslaught of AI discovery and code submission
  - Discovered security issues stop work until solved
  - AI submissions need more scrutiny due to complexity
- Project continuity is not assured
  - Only project of this size with no full-time staff

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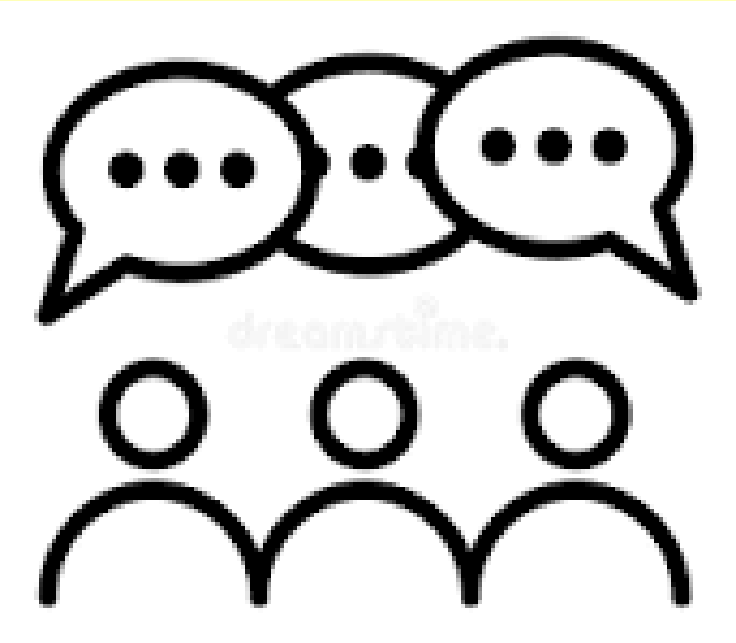
Bottom Line. Impact

- Project has always faced these road blocks
  - It is amazing that it has held together for 25+ years!
    - Testament to community dedication, zeal and knowledge
      - Especially those working in the trenches
- The biggest impact we see is
  - Potential to significantly slip planned roadmap
    - This is a worst case scenario
      - There are always mitigations we can employ
      - They only reduce the impact not necessarily eliminate it

Discussion